

Art Unit: 2829

09/843,650

SD

07/21/04

1. (Currently Amended) A semiconductor apparatus comprising:

a semiconductor device to be mounted on a circuit board, said device having a device main surface, peripheral device edges bounding the main surface and a peripheral side surface extending from said peripheral device edges and bounding said device;

a plurality of conductive posts electrically connected to the semiconductor device, said conductive posts having outer edges; [and]

a resin covering over said device main surface for sealing said device main surface, said resin covering leaving exposed said device peripheral side surface; and

means for mounting the device onto a circuit board by soldering, including a plurality of conductive bumps respectively positioned on an outer end of each of the conductive posts for soldering onto the circuit board, wherein [a peripheral edge of a resin covering for sealing a surface of the semiconductor device and an] the outer [edge] edges of [the] said conductive [post] posts are separated from said device peripheral edges by a distance narrower than a height of the conductive post.

2. (Previously Amended) A semiconductor apparatus according to claim 1, wherein the distance is in a range between 50 and 100 micrometers.

3. (Previously Amended) A semiconductor apparatus according to claim 1, wherein the semiconductor device is provided with a plurality of electrode pads connected to the conductive posts, the electrode pads being arranged on a line extending in a center portion of the semiconductor device.

4. (Original) A semiconductor apparatus according to claim 1, wherein the semiconductor device is provided with a plurality of electrode pads connected to the conductive posts, each of the electrode pads being arranged between two adjacent conductive posts.

5. (Original) A semiconductor apparatus according to claim 1, wherein the semiconductor device is provided with a plurality of electrode pads connected to the conductive posts, each of the electrode pads being arranged directly under a corresponding conductive post.

6. (Original) A semiconductor apparatus according to claim 1, wherein the conductive bumps are of solder.

7. (Currently amended) A semiconductor apparatus comprising:  
a semiconductor device having a device main surface, peripheral device edges bounding the main surface and a peripheral side surface extending from said peripheral device edges and bounding said device;

Art Unit: 2829

a plurality of conductive posts electrically connected to the semiconductor device, said posts having post outer ends and post peripheral surfaces extending from said device main surface to said post outer ends, said post peripheral surfaces having post inner end portions extending from said device main surface, and post outer end portions extending from said post inner end portions to said post outer ends;

means for mounting the device onto a circuit board by soldering, including a plurality of conductive bumps respectively positioned on said post outer ends for soldering onto the circuit board; and

a molding resin covering said device main surface, wherein said molding resin includes a step along the entirety of a peripheral portion of said device main [portion] surface, the step covering said post inner end portions, while leaving exposed said post outer end portions and said device peripheral side surface.

8. (Original) A semiconductor apparatus according to claim 7, wherein the difference in level between the upper portion and lower portion of the step is half of a thickness of the mold resin.

9. (Previously Amended) A semiconductor apparatus according to claim 7, wherein the difference in level between the upper portion and lower portion of the step is in a range between 40 and 60 micrometers.

10. (Original) A semiconductor apparatus according to claim 7, wherein the conductive bumps are of solder.

Application/Control Number: 09/843,650

Page 5

Art Unit: 2829

CLAIMS 11 THROUGH 23 ARE CANCELLED